

**Amendments to the Specification**

Please replace pages 1 and 1a with the following:

**WO00/56096**

**~~PCT/GB99/04179~~**

**IMPROVED MESSAGE ACCESS FOR RADIO  
TELECOMMUNICATIONS SYSTEM**

**BACKGROUND OF THE INVENTION**

**Field of the Invention**

This invention relates to an improved message access arrangement for a radio telecommunications system such as Universal Mobile Telecommunications System (UMTS) and relates especially to the selection of preamble signatures.

**Description of the Related Art**

During the set up of a call from a mobile telephone to the UMTS system, a mobile needs to select a preamble signature from the available signatures; subsequently, while waiting for an acquisition indication, the mobile may reselect a signature. It may occur that the mobile selects a signature associated with a stalled state, or that collisions occur, and call connection is delayed.

In WO98/18280 Ericsson, there is disclosure of a mobile telecommunication system in which each mobile requesting access can transmit one of a number of different preamble bit or signal patterns, referred to as "signatures", stored in an internal memory location. The mobile selects one of the stored signatures randomly. However, the arrangement does not address the issue of avoiding stalled states or collisions.

**BRIEF SUMMARY OF THE INVENTION**

It is an object of the invention to improve the efficiency of signature selection by a mobile.

According to the invention a mobile telephone for the universal radio mobile telecommunication system comprises a processor, a transmitter/receiver, and an antenna, characterised in that the processor is arranged, when the mobile is in an active mode to monitor the ~~acquisition indication channel~~ Acquisition Indication Channel (AICH) of the UMTS; to store for the duration of the active mode the usage by other mobiles of each available preamble signature; and to select when required a signature the recorded usage of which is unlikely to cause collisions.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

In the accompanying drawings, the prior art is illustrated in figures 1 – 7 in which:[-]

Figure 1 is a schematic diagram of a part of a radio telecommunications system;

Figure 2 illustrates a physical random access channel slots structure;

Figure 3 illustrates the structure of a random access transmission;

Figure 4 illustrates the structure of an access burst from a mobile;

Figure 5 illustrates the message part of the random access burst;

Figure 6 illustrates the layers involved in message acknowledgement and

Figure 7 illustrates how random access acquisition indication and forward access channels interact to acknowledge preamble and message signals from a mobile.

The invention will be described with reference to Figure 8, which is a flow chart in a mobile system for signature selection.

**Page 2, line 1, please insert the following heading:**

### **DETAILED DESCRIPTION**

**Please replace the first paragraph on page 5 as follows:**

The processor of the MS ~~stores~~ stores a set of preamble signatures available to the MS. If a signature is in use by a stalled state it is indicated as not available. Of the available signatures, the store records the usage count of each signature[.]. The signatures are divided into relatively high and relatively low usage counts[.]. The MS randomly selects one of the relatively low usage count signatures which is not indicated as unavailable due to use by a stalled state at step 6 or step 9.